

Boxborough

2016

September 9, 10, & 11

Our 33rd Convention



ARRL
New England Division
Convention



Holiday Inn Boxboro Woods
Boxborough, Massachusetts

Welcome to Boxboro! 2016 **From your Holiday Inn Friends**



**242 Adams Place
Boxborough, MA 01719
978-263-8701**

Weddings

Trade Shows

Bar/Bat Mitzvahs

Corporate Meetings

Pool Parties

Birthday Parties

Retirement Parties



Welcome to Boxboro! 2016

We hope you like this new convention program. In these pages, you will find general convention information as well as detailed information for our entire forum program. We think Boxboro! offers the best collections of forums you will find at ham convention and hope you agree.

We also hope you have fun - and will tell your friends that didn't go that they missed a whole lot and should come next year!

One of the key reasons we are able to bring you this brochure is our advertisers that you will see through the program. In addition to the several ham clubs and amateur-radio related vendors, you'll find several local businesses in Boxboro and Harvard are also helping us out.

If you have the need for their offerings, please let them know you saw their ad so that they will want to advertise with us again.

**73,
Bob, K1IW**

OFFICIAL PROVIDER OF TALK-IN FOR THE BOXBORO! CONVENTION



Minuteman Repeater Association

Extends a welcome to all convention attendees!

250 Members strong and growing!

Across Eastern and Central Massachusetts we have:

20 FM REPEATERS on all bands 10M through 900MHz

2 DSTAR REPEATERS

4 IRLP Nodes, one with Echolink

APRS Digi

Dues \$25 / year

Come visit us in the Fern Room (off the Atrium across from the Gazebo) where you can meet some of our members, join our club, and enter a chance to win one our great door prizes (membership not required to win)
Winners drawn Sunday at noon

www.mmra.org

Boxboro 2016 ~ Schedule

Friday, September 9

Educational Workshops:

Antenna Design & Modeling
Approaches to Illegal Zoning Bylaws
ARES Workshop
SKYWARN Workshop

DX/Contest Dinner

The VP8S South Sandwich & South Georgia
DXpedition David Collingham, K3LP

Door Prizes!

Saturday, September 10

Flea Market and Exhibit Hall: 9 am—5 pm

Forums: 9 am—5 pm

Convention Banquet: 6 pm—10pm

Heroes of Amateur Radio, Past, Present, and Future
Radio Historian Donna Halper

Door Prizes!

Sunday, September 11

Flea Market and Exhibit Hall: 9 am—2 pm

Forums: 9 am—1pm

Prize Drawing: 2 pm

W1A Special Event Station

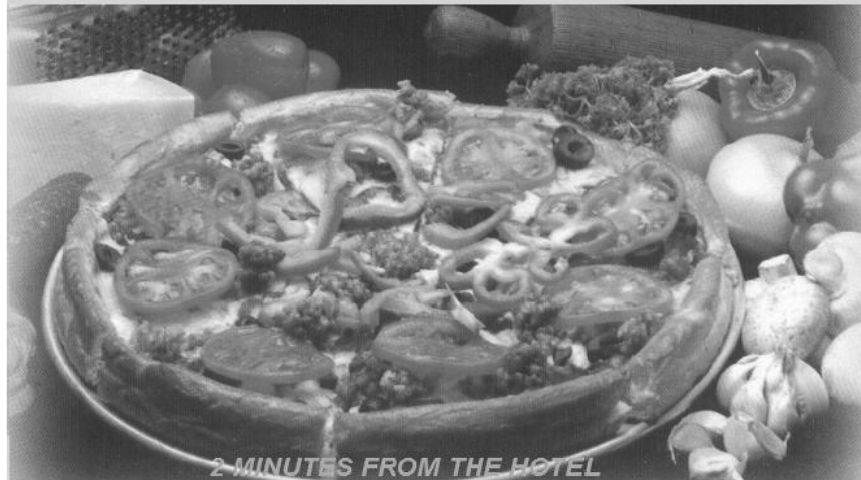
Friday & Saturday: 7 am—6 pm, 9pm — midnight

Sunday: 7am—noon

DXCC Card Checking

Available in the Exhibit hall

BRAVO PIZZA



2 MINUTES FROM THE HOTEL

DELIVERY - (978) 635-0637

\$10 Minimum \$1 Delivery Charge



Radio Oasis, LLC

G5RV's, DIPOLES, NVIS ANTENNAS www.radio-oasis.com

The New England FEMARA Scholarships

This is why we hold the convention.

The wonderful hams listed below are recent recipients of the FEMARA scholarships that your attendance at Boxboro helps make possible. Your donations, and all proceeds from the convention go to the FEMARA scholarship fund, which helps students attend a college or trade school of their choice. The ARRL Foundation administers the perpetual fund. Each year the foundation scholarship committee meets to carefully review hundreds of applications received from remarkably talented young men and women. The foundation receives cash and stock donations from hams and their families worldwide which include bequests from living wills and trusts. Please consider helping this great undertaking.

For applications write the ARRL Foundation, Newington, CT 06111 - When you donate to the foundation, please specify the FEMARA New England Fund!

2016 Winners

Yettive S. Crestohl, K1YTV
George E. Main IV, W1GIV
Daniel A. Shrives, KC1AUA
Bahnou Upton, KB1OIS

2015 Winners

Jakob F. Anderson, W1JFA
George E. Falardeau III, KC1ANB
Marc A. Robbins, KC2MJD
Benjamin Yuscavage, KB3TBJ

2014 Winners

Taylor M. Brock-Fisher, KB1NOW
Ryan Garbe, KB1ZAK
Alexander F. Jacobs, KB1QJJ
Patrick R. Prescott, KC1AJT
Katelyn N. VanderClute, KB1MGK
Nicholas R. Wattendorf, N1NRW



The Hampden County Radio Association is Western Massachusetts' most active Ham Radio Club since its start in the mid-1950s.

With over 50 people at every monthly meeting and members being active in DX Chasing, NPOTA, SOTA, Field Day, Contesting, Kit Building, License Classes, and all aspects of ham radio activities.

Whether you are a new ham or someone who has been licensed for many years, the HCRA is the Ham Club for You.

www.hcra.org
www.facebook.com/groups/HampdenCountyRA
 HCRA, PO Box 0562, Agawam, MA 01001

Come join us at our monthly meeting on the first Friday of each month or any of our activities (September thru June)

Friday, September 9

Room	Federal	Colonial	Seminar	Cotillion	Directors	Board	Greenw'd	Deck
09:00	Antenna Design & Modeling		EMA ARES Workshop					
12:00								
13:00	Antenna Design & Modeling		SKYWARN Workshop	Approaches to Illegal Zoning Bylaws				
14:00								
16:00								
17:00								
Seating	350	125	72	100	40	50	14	40

	Federal	Colonial
18:00	Cocktails	
19:00	DX Dinner	Movie [9:30 pm]
20:00		
21:00		

Frequency — starring Dennis Quaid & Jim Caviezel
Free to all paid attendees! Popcorn Included!

This 2000 production features magical auroral propagation and tube transmitters! What more could you ask for?

John Sullivan (Jim Caviezel), travels back in time to October 12, 1969 to change the outcome of the out-of-control Bruxton fire that took the life of his father (Dennis Quaid), a heroic firefighter. Now John may get exactly what he wished for -- and much more than he bargained for.



Largest youth amateur radio club in Greater Boston!

Weekly Club Net

Tuesdays 7:30p W1CLA/R (446.325- PL146.2 – IRLP/Echolink: 4942)

Eastern Massachusetts Youth Net

Thursdays 7:30p MMRA Repeater Network & W1CLA/R

WWW.CC-ARC.ORG

DEXTER SOUTHFIELD

20 Newton St., Brookline, MA 02445

Saturday, September 10								
Room	Federal	Colonial	Seminar	Cotillion	Directors	Board	Greenw'd	Deck
09:00	Keynote address: Tom Gallagher, NY2RF				Tech in a Day Stan Stone W4HIX (through 5 pm)			
10:00	Elecraft	Youth Forum I	Two CW Birthdays	The Test Bench		CHIRP	Fox Hunting	VE Session I
11:00	Flex	ISS Education	HF Propagation	SKYWARN Overview		Astron Power Supplies	NTS Forum	
12:00	YAESU	AMSAT I		Remote Gateways		Battery Technology	YLS at Noon (through 2 pm)	
Seating	350	125	72	100	40	50	14	40



From the Holiday Inn:

Boxborough – Rt. 111 South 2½ Miles (978) 263-9008

Harvard – Rt. 111 North 5½ Miles (978) 391-1177

We have a selection of over 1500 wines,
650+ beers, and a huge variety of spirits.

grapevineliquorstore.com

Saturday, September 10								
Room	Federal	Colonial	Seminar	Cotillion	Directors	Board	Greenw'd	Deck
13:00	Antenna Topics	NESMC	HF Propagation	Fast-Scan ATV	Tech in a Day Stan Stone W4HIX (from 9 am)	Power Pole	YLs at Noon (from 12 noon)	VE Session II
14:00	ARRL Forum I	YCCC Forum	NE QRP	Mobile HF		Reviving and Repairing Old Rigs — Without Smoke		
15:00	The Doctor is In — I			Digital Radio Repeater Modes Forum		Enigma History		
16:00	AM Forum	CQ USA_CA Award	Helping Hand to New Hams			Girl Scouts “Thinking Day On The Day On The Air”		
Seating	350	125	72	100	40	50	14	40

Federal		Colonial	Seminar
18:00	Cocktails		
19:00	Convention Banquet	Movie [9:30 pm] See Page 5	NE QRP Meet & Greet, Vendors Night & Build-a-Thon
20:00			
21:00			



IC-7300
HF + 6M TRANSCEIVER

- 100 Watt Output (30W AM)
- RX: 0.030-60.000MHz*
- IP+ Improved Signaling
- RF Direct Sampling Receiver
- 4.3" LED Touch Screen Color Display
- Real-Time FFT Waterfall Scope

#IcomEverywhere

- 101 Channels
- USB Interface
- SD Card Storage
- CW Auto-tuning
- Direct Touch Screen Band Switching
- RS-BAT Remote Control Software (optional)

Summer Fun

ICOM

©2016 Icom America, Inc. The Icom logo is a registered trademark of Icom Inc. All other trademarks remain the property of their respective owners. All specifications are subject to change without notice or obligation. 31104

Sunday, September 11								
Room	Federal	Colonial	Seminar	Cottillion	Directors	Board	Greenw'd	Deck
09:00	9/11 Anniversary Forum	Amateur Radio UFO Net (ARUFON)	6M & E-Skip Propagation					
10:00	The Doctor is In II	AMSAT II	Antenna track: Double Zepp, Wire-Fed Doublets, Unique Trap Antennas, Multi-band Vertical Loops	High Speed CW	W1AF & W1YU: Ham Radio at Harvard and Yale	MARS Meeting (closed)		VE Session III
11:00	MMRA	ARRL Forum II		Youth Forum II	Forum on University ARCs	MARS Forum (open)		
12:00	What's Behind Boxboro?	DTV Repack: The OTA TV Channels Are Changing Again!						
13:00								
Seating	350	125	72	100	40	50	14	40

Federal	
14:00	Prize Drawing and Convention Wrapup
15:00	

"What's Behind Boxboro?" *at noon*. Come learn about some of the things it takes to put Boxboro! together, and learn how you can get involved.

20% Off!

Any One Regularly Priced Item With This Coupon
Offer Valid 9/9/16 - 9/30/16 Only
Limit One Coupon Per Customer

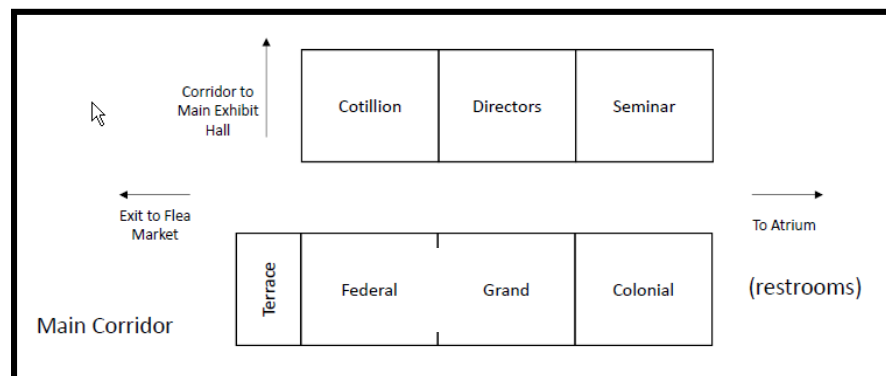
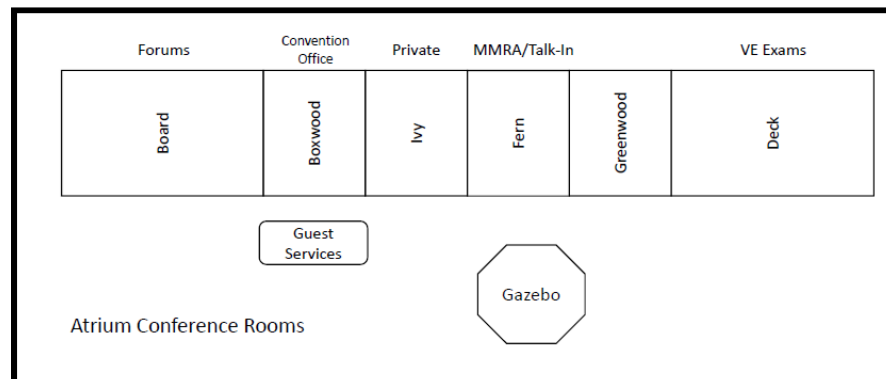
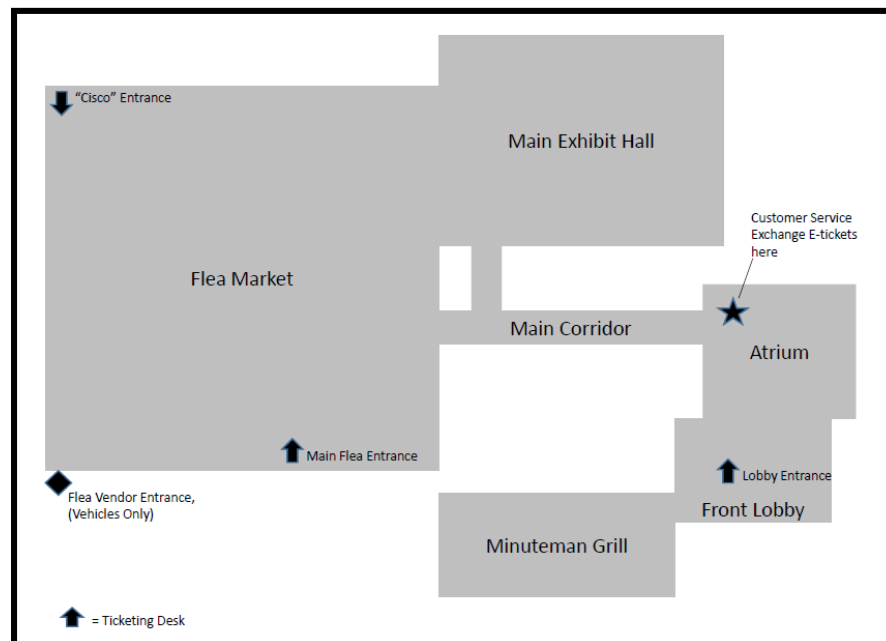
Electronics Plus

"Electronic Accessories for the Home and Hobbyist"

480 King Street
Littleton, MA. 01460
(978) 486-3375
sales@electronicsplus.com
Hours: M-F 9-6, Sat. 9-5

NTE Electronics • Philmore • Velleman • Eclipse Tools
Uniden • Cobra • Wilson CB Antennas • Plus Much More!

Site Maps



NEDECN

New England Digital Emergency Communications Network

- * DMR repeaters with 2-simultaneous conversations per RF channel
- * Interconnecting with over 82 New England area repeaters
- * World-wide coverage via the DMR-MARC network

The New England-Wide, Dual Channel Network
providing communications for routine and special events

www.nedecn.org



C4FM/FM 144/430 MHz Dual Band 5 W
Digital Transceiver

FT2DR

◀ Improved 66 ch GPS receiver included ▶



C4FM/FM 144/430 MHz Dual Band 5 W
Digital Transceiver

FT1XDR

◀ Improved 66 ch GPS receiver included ▶



C4FM/FM 144/430 MHz Dual Band 50 W
Digital Transceiver

FTM-100DR

◀ Improved 66 ch GPS receiver included ▶



C4FM/FM 144/430 MHz Dual Band 50 W
Digital Transceiver

FTM-400XDR

◀ Improved 66 ch GPS receiver included ▶



C4FM/FM 144 MHz 65 W
Digital Transceiver

FTM-3200DR

◀ Genuine 65 Watts High Power ▶

System Fusion

*The best solution for the Future
It provides total integration and compatibility of
both digital and conventional FM communications*



C4FM/FM 144/430 MHz Dual Band Digital Repeater

DR-1X

YAESU
60th Anniversary

YAESU USA
6185 Phyllis Drive, Cypress,
CA 90630 (714) 827-7900

For latest Yaesu news, visit us on the Internet: <http://www.yaesu.com>
Specifications subject to change without notice. Some accessories and/or options may be standard in certain areas. Frequency coverage may differ in some countries. Check with your local Yaesu Dealer for specific details.

The radio...YAESU

FM
446.000

C4FM
146.520

CW
7.030

SSB
21.295

SSB
144.200

CW
1.820

SSB
14.195



Enjoy ALL MODES
On HF through UHF in one radio

Compact All Mode Transceiver
Covers 1.8 MHz to 450 MHz continuously
(Transmit in Amateur Bands)

HF/VHF/UHF 100 W ALL MODE TRANSCEIVER

C4FM
Clear and Crisp Voice Technology

AMS
Automatic Mode Select

144/430 MHz 50 W

FT-991

YAESU
60th Anniversary

YAESU USA
6185 Phyllis Drive, Cypress,
CA 90630 (714) 827-7900

For the latest Yaesu news, visit us on the Internet: <http://www.yaesu.com>
Specifications subject to change without notice. Some accessories and/or options may be standard in certain areas. Frequency coverage may differ in some countries. Check with your local Yaesu Dealer for specific details.

Convention Presentation Abstracts—1

FRIDAY, SEPTEMBER 9

FEDERAL ROOM

Note: Please come prepared; bring a Windows-based laptop preloaded with some version of EZNEC, including the free demo version, if possible.

0900-1200 EZNEC ANTENNA MODELING – I

Joel Hallas, W1ZR An introduction to EZNEC Antenna Modeling

1300-1700 ANTENNA DESIGN & MODELING – II

Joel Hallas, W1ZR EZNEC, cont'd, advanced features, Q&A

SEMINAR ROOM

0900-1200 ARES WORKSHOP

Marek Kozubal, KB1NCG An introduction to EMA ARES protocols in repeaters, message passing, etc.

1300-1600 SKYWARN TRAINING

Rob Macedo, KD1CY Offered by the NWS Taunton, upon completion of this class, you will become an official NWS Taunton SKYWARN Spotter.

COTILLION ROOM

1300-1400 APPROACHES TO ILLEGAL ZONING BYLAWS

Fred Hopengarten, K1VR; Dennis Egan, W1UE

SATURDAY, SEPTEMBER 10

FEDERAL ROOM

0900-1000 CONVENTION KEYNOTE ADDRESS

Tom Gallagher, NY2RF, ARRL CEO

1000-1100 SHRINKING THE HF TRANSCEIVER

David Shoaf, KG6IRW Elecraft's David Shoaf will discuss how its engineering teams were able to reduce the size of the typical HF transceiver across the past 15 years. A discussion of the new KX2 is included.

1100-1200 FLEX

Steve Hicks, N5AC A discussion of the FLEX-6000 series radios, including recent enhancements: SmartSDR v1.6; integrated Winkeyer emulation; enhanced logger integration; SO2R with the FLEX-6700; using the FLEX-6000 in digital contesting; and an overview of the new Maestro remote control. Questions regarding FlexRadio's products and software-defined radios will be answered at the conclusion.

1200-1300 YAESU System Fusion

1300-1400 ANTENNA TOPICS

Joe Reisert, W1JR This is a review of the most important antenna system parameters, and how to maximize antenna performance.

1400-1500 ARRL FORUM - I New England Division Director Tom Frenaye, K1KI, and Vice Director Mike Raisbeck, will talk about current ARRL and FCC topics and hold a Q&A session.




**ON ROUTE 128 - NEEDHAM, MA
TAKE EXIT 19A**

Then First Left at Gas Station
& Second Left onto 40 Franklin Street

781-449-1005
www.youdoitelectronics.com

Open Weekdays 8am to 9pm; Saturdays 9am to 6pm

New England's Most Complete Outlet For Name Brand Electronic Equipment & Supplies




**Celebrating
67 Years
in Business**

**Two huge showrooms of audio, video, electronic equipment,
parts and supplies like nowhere else!**

**Stop looking! America's unique electronic store is right
in your own backyard!**



- Over 400 Different Types of Batteries
- Phones & Radio Communications
- TV & Video
- Home Theater & Audio
- AC/DC Power Products
- Computer Networking
- Microphones & Accessories
- Flashlights & Magnifiers
- Antennas




- Hobby & Electronic Kits
- Security Cameras & DVRs
- Audio Video Furniture & Mounts
- Wire & Cables
- Electronic Components
- Test Equipment & Tools
- DJ Equipment & Lights
- Foreign Country Adapters

**New Items
Arriving daily!!**

SAVINGS COUPON! Valid September 9 through 24, 2016

\$5 off


YOUR PURCHASE OF \$15 OR MORE



www.youdoitelectronics.com
781-449-1005
40 Franklin St. Needham, MA 02494

Valid September 9 through Saturday, September 24, 2016 until 6pm. Limit one coupon per household. Not valid for prior purchases, special orders, open accounts, or gift certificate purchases. Not applicable on dealer and/or any other special pricing. Cannot be combined with any other special offers or coupons. Any purchase minimum is calculated before tax. No cash/credit back. For in store use only. Coupon must be surrendered at time of purchase. No photo copies accepted. If you return an item(s) that qualify for discount, discount will be lost. Please present coupon at start of transaction.

Cashier scan discount code at the end of transaction, staple coupon to duplicate receipt



9A9RRL16

Convention Presentation Abstracts—2

FEDERAL ROOM (Sat., 10 Sept.)

1500-1600 THE DOCTOR IS IN – I

Joel Hallas, W1ZR The "Doctor" sessions are stand-up versions of my monthly QST column. I provide answers to your technical questions.

1600-1700 AM FORUM

Tim Smith, WA1HLR Audience participation is encouraged in this discussion of current issues in AM operation, new and old technologies and relating subjects.

COLONIAL ROOM

1000-1100 YOUTH FORUM – I

Bob Phinney, K5TEC Join the Clay Center ARC for a discussion about attracting today's youth to ham radio, what they enjoy about the hobby, what kinds of technology they use, and ways to attract more youth.

1100-1200 INTERNATIONAL SPACE STATION EDUCATION

Dan Barstow, KA1ARD Dan, Education Manager for the ISS, will share his work with ARISS (Amateur Radio on ISS) supporting ham radio communications between students and astronauts, as well as his own efforts to connect directly with ISS through its APRS repeater system. He will share stories of life on the ISS, how astronauts use on-board ham radio, and how they deploy some of the new CubeSats. Also -- some of the great ISS photos.

1200-1300 AMSAT – I: AMSAT-NA Fox Satellite Program

Burns Fisher, W2BFJ Burns is the Fox-1 Software Team Leader, and will discuss the Fox-1 class spacecraft with upcoming launches.

1300-1400 NESMC

1400-1600 YCCC FORUM

Tony Brock-Fisher, K1KP YCCC will present a program of interest to contesters and DXer's which will include the following: *Ask the Experts* - an Open Panel Discussion to field contesting-related questions from the audience; *\$400 DXpedition New England style!* - a slide presentation on the recent IOTA DXpedition to the Isle of Shoals (NA-217) by K1RX, N1YX, and N1SRD. All are welcome.

1600-1700 COUNTY HUNTING AND OTHER AWARD HUNTING

Ted Melinos, K1BV An introduction to the USA-CA Award (USA Counties) and the broad field of awards hunting.

SEMINAR ROOM

1000-1100 TWO CW BIRTHDAYS - McElroy (115th) and WCC (95th)

1100-1300 BASICS OF HF RADIO PROPAGATION

Tom Carrigan, NE1R An overview of HF propagation, describing how and why HF radio signals travel various distances, covering at an introductory level the effects of the Sun on the atmosphere. Commonly observed phenomena are explained as well as the meanings of such familiar terms as Ionosphere, Corona, Skywave, K In-



Aesop Engineering
Minuteman Airfield, Stow, Ma.

Convention Presentation Abstracts—3

dex, Groundwave, Ionogram, Sunspots, Direct Wave, Sunspot Cycle, NVIS, Geomagnetic Field, Skip, Skip Zone, Geomagnetic Storm, Solar Wind, and CME.

SEMINAR ROOM (Sat., 10 Sept)

1300-1600 NEW ENGLAND QRP
Carl Achin, WA1ZCQ

1600-1700 HELPING HAND TO NEW HAMS

Greg Caliri, W1AMA Many Hams earn their first ticket purely through "book learning," and need advice from others but don't know where to turn. This discussion addresses some of the issues facing a newly licensed amateur.

COTILLION ROOM

1000-1100 THE TEST BENCH

Adrian Zeffert, AB2IX Many Amateur Radio Operators are unfamiliar with simple test equipment and procedures that could save money in repairs. Key test equipment will be described sufficiently to help you choose reasonably priced test equipment and know how to use it.

1100-1200 SKYWARN OVERVIEW

Rob Macedo, KD1CY The SKYWARN program is the National Weather Service's volunteer weather spotting program where severe weather reporting into the NWS Forecast Office protects life and property. This talk gives an overview of the program and a recap of recent severe weather events.

1200-1300 REMOTE GATEWAYS

Fred Kemmerer, AB1OC This covers the design and operation of a remote operating gateway using a FlexRadio 6000. It will cover all aspects of remote operations: control of amps, tuners, antennas, power, networking, etc.

1300-1400 FASTSCAN ATV

Fred Kemmerer, AB1OC This addresses recent experiences with Digital Fast Scan ATV on 70 cm, including what is required to build a station, video of actual DATV QSOs and an in-room demo (conditions permitting) of DATV.

1400-1500 MOBILE HF STATIONS

Fred Kemmerer, AB1OC This covers building a state of the art mobile HF station in three levels:- 100Ws with HAM Stick antennas, a Screwdriver antenna for all HF bands, and the addition of an amp for higher power. Results at each level as well as tips and areas to focus on are covered.

1500-1700 DIGITAL RADIO REPEATER MODES

Rick Zach, K1RJZ Rick will discuss digital voice repeater technologies: P25, DMR, D-Star, Fusion, and NXDN, "on an equal footing in a single unbiased presentation. These will be presented from the perspective of five subject matter experts with technology breakout sessions to follow. An emphasis will be to present the acceptance status of each in New England as of September 2016.
Experts: P25: Will Bartlett, N1PXA; D-Star: tony Souza, NN1D; DMR: Bill Barber, NE1B; Fusion: Wes Grey, KJ6YC; NXDN: John Frye, N1OTY



TrueLadderLine.com™

The most efficient, multi-band, wire antenna available

The Original, W7FG, 600Ω, Ladder Line Antenna Since 1985

- Lightweight
- Full Legal Limit
- UV Resistant
- Minimal SWR change when wet. No re-tuning!
- Costs less than making your own
- No solder joints, crimps, nuts & bolts to fail
- Low wind loading
- ALL USA Materials and MADE IN THE USA!

All of our feedline and antennas are built by adults with disabilities
with 10% of proceeds going to them.

Visit our website and use code "BOXBORO" at checkout for a 20%
discount on feedline and antennas.

Be sure to attend the forum....

"The Amazing Effectiveness of the Double Extended Zepp"

WB2JIX, LLC
Brian W Duerr
206 Conway Rd.
Starksboro, VT 05487
(802) 598-6825
brian@trueladderline.com

Convention Presentation Abstracts—4

DIRECTORS ROOM (Sat., 10 Sept)

0900-1700

TECH IN A DAY REVIEW

Stan Stone, W4HIX and members of the Cape Ann ARA, Gloucester, MA

BOARD ROOM

1000-1100

PROGRAM YOUR RADIOS WITH OPEN SOURCE SOFTWARE

James Lee, N1DDK

This presentation is an overview of *Chirp* software which is used to program most radios. *What is Chirp? Supported radios? Common problems and solutions?* A workshop will follow. Power supplies along with computers and programming cables will be available.

1100-1200

CARE AND FEEDING OF ASTRON POWER SUPPLIES

James Lee, N1DDK

Astron's are the most common supplies found in most ham shacks. This talk will outline repairs and upgrades to a few Astron supplies: the RS20, RS35, and other models. Photos and hands on parts will allow attendees to walk away with the confidence to repair their supply.

1200-1300

BATTERY TECHNOLOGY

John Kalotai, N1OLO

Battery technology and its impact on Ham Radio.

1300-1400

POWERPOLE

John Kalotai, N1OLO

An hands-on intro to Anderson PowerPoles.

1400-1500

Reviving and Repairing Old Rigs — Without Smoke

Ted Robinson, K1QAR

An experienced overhauler of R-390A radios shares some of his tube radio wisdom.

1500-1600

ENIGMA MACHINE: NEW DISCOVERIES

Tom Perera, W1TP

Enigma cipher machines encoded German military communications during WW-II. New discoveries in Enigma history, construction and deciphering will be presented and discussed by Tom Perera, who found and restored the Enigma used in the "Imitation Game" movie.

1600-1700

GIRL SCOUTS "THINKING DAY ON THE AIR"

Skip Youngberg, K1NKR

The presentation covers Nashoba Valley ARC's two years of TDOTA, resulting in an ARRL Girl Scout Activity Patch. We hope to encourage other clubs to support this activity as outreach in their local area.

GREENWOOD ROOM

1000-1100

FOX HUNTING

1100-1200

NTS FORUM

Marcia Forde, KW1U

1200-1400

YLS AT NOON

Anne Manna, WB1ARU

All YLs (licensed or not) are invited to come for a "meet & greet" with other YLs. Bring your own lunch if you would like and come for as long as you can. Learn about opportunities for women in our hobby and share your experiences. Sponsored by WRONE and YLRL.



INVITES YOU TO ATTEND OUR ANNUAL MEETING

SATURDAY SEPTEMBER 10th

1:00PM

in the Colonial Room

**NESMC provides frequency coordination for
amateur repeaters in New Hampshire, Maine,
Massachusetts and Rhode Island.**

**Membership is free and open to all.
(You do not need to own a repeater to be a member.)**

www.nesmc.org



Convention Presentation Abstracts—5

DECK ROOM (Sat., 10 Sept)

1000-1300 VE SESSION – I

1300-1700 VE SESSION – II

SUNDAY, SEPTEMBER 11, 2016

FEDERAL ROOM

0900-1000 9/11: FIFTEEN YEARS LATER

Steve Schwarm, W3EVE We encourage those who served in New York City or Washington, D.C. after 9/11 to attend and to reflect.

1000-1100 THE DOCTOR IS IN – II

Joel Hallas, W1ZR The "Doctor" sessions are stand-up versions of my monthly QST column. I provide answers to your technical questions.

1100-1200 MINUTEMAN REPEATER ASSOCIATION (MMRA)

Bob DeMattia, K1IW The MMRA operates a system of over 20 repeaters located in Eastern and Central Massachusetts. In this short multi-media lecture, how the MMRA network is tied together will be explained.

1200-1300 WHAT'S BEHIND BOXBORO?

Bob DeMattia, K1IW

COLONIAL ROOM

0900-1000 The Amateur Radio UFO Net (ARUFON)

Rich Vitello, W1RV Rich Vitello has been the NCS for the weekly UFO Net (ARUFON) for over 30 years. He looks for more than just radio waves in the air. Join Rich for this interesting talk on UFOlogy and Amateur Radio.

1000-1100 AMSAT – II: Getting Started with Amateur Satellites

Ernie Bauer, N1AEW Ernie shows how to use a dual-band HT to work the FM Satellites. He will provide an overview of amateur satellites, satellite tracking, equipment options and configuration, operating procedures, and making a contact.

1100-1200 ARRL FORUM - II New England Division Director Tom Frenaye, K1KI, and Vice Director Mike Raisbeck, will talk about current ARRL and FCC topics and hold a Q&A session.

1200-1300 DTV Repack: The OTA TV Channels Are Changing Again!

Mike Keller, W1BNC We will walk thru the challenges of the upcoming second DTV repack and the effects it might have on Ham Radio. The UHF band will be shrinking to provide spectrum for auctioning and many stations may be forced to change channels. The resulting increase in RF density may afford unforeseen opportunities for unwanted intermod effects.



New England Amateur Radio

Public Service • Education • Radio Communications

www.ne1ar.org

New England Amateur Radio is a non-profit 501(c)3 organization to promote education and growth of amateur radio as a STEM activity, as a communications hobby, and as support for emergency preparedness and public service.

NEAR can provide technical, educational, volunteer examiner, and license classes to clubs, groups, public service, and schools.



We are actively raising funds to support restoration and outfitting of a mobile communications van. The goal is to make it available for public service, emergency communications, educational activities, and general promotion of the hobby.

www.ne1ar.org/van

PayPal: info@ne1ar.org



Convention Presentation Abstracts—6

SEMINAR ROOM (Sun., 11 Sept)

0900-1000 SIX METERS & E SKIP PROPAGATION

Joe Dzekevich, K1YOW Can Ham Radio show that wind shear causes mid latitude Es?

1000-1200 ANTENNA TRACK

Steve Kerchel, AA4AK The Amazing Effectiveness of the Double Extended Zepp The analysis, design and construction of a double extended Zepp, and my experience using it from my Maine QTH to make 40M QSOs with the Far East.
Brian Duerr, WB2JIX Using 600-Ohm Ladder Line and Doublets
 A summary of the advantages of open wire-fed doublets and how this once popular antenna is making a comeback
Jacques, Audet, VE2AZX Multi-band vertical loops

COTILLION ROOM

1000-1100 HIGH SPEED CW IN YOUR HEAD

George Allison, K1IG Many hams reach a CW speed of about 25 WPM and think they can't go any higher. Learn how to copy in your head and reach speeds well above 40 WPM.

1100-1200 YOUTH FORUM - II

Bob Phinney, K5TEC Join the Clay Center ARC for a discussion about attracting today's youth to ham radio, what they enjoy about the hobby, what kinds of technology they use, and ways to attract more youth.

DIRECTORS ROOM

1000-1100 W1AF & W1YU: PAST, PRESENT, & FUTURE: AMATEUR RADIO AT HARVARD AND YALE

Douglas Maggs, KK4UHK & James Surprenant, AB1DQ A presentation on the history of amateur radio on the college campuses of Harvard and Yale with an eye toward the future.

1100-1200 FORUM ON UNIVERSITY ARCS

Edward Snyder, W1YSM This will be a Town Hall Meeting to encourage University-affiliated and other licensed radio amateurs to examine the status of University Amateur Radio Clubs and seek ways to revitalize these programs. The meeting will be moderated by the Yale Amateur Radio Club W1YU, with support from W1AF (Harvard) and other university clubs.

BOARD ROOM

1000-1100 MARS MEETING (MEMBERS ONLY)

Robert Mims, WA1OEZ & Marian Juskuv, AA1VU

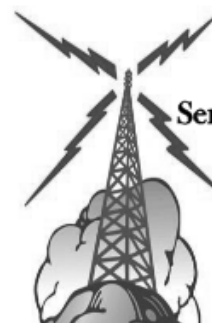
1100-1200 MARS FORUM (OPEN)

Robert Mims, WA1OEZ & Marian Juskuv, AA1VU
 How and why MARS interacts with the Amateur Radio community to fulfill its mission for the U.S. Department of Defense.

DECK ROOM

1000-1400 VE SESSION – II

Stratford Amateur Radio Club



SARC

Service to the community since 1946

W1ORS

Stratford CT

<http://www.qsl.net/w1ors/>



Family Owned ☼ Locally Grown Produce ☼ Locally Baked Breads



Store Hours 9-5 everyday except Tuesday

Breakfast 9-11 Lunch 11-3

Come try our Apple Cider Donuts!

LIVE BLUEGRASS JAM SESSIONS EVERY SUNDAY 1³⁰-4³⁰

Rt. 111 Harvard, 1 mile West of I-495

www.westwardorchards.com (978) 456-8363

Special Offer



ARRL AMATEUR RADIO
The national association for
www.arrl.org/shop



\$5 Shipping for Boxboro Attendees
Thank you for attending the **2016 ARRL New England Division Convention**.
Enjoy **\$5 Shipping** on your online order now through September 30, 2016.
Enter **Coupon Code BOXBORO** at www.arrl.org/shop.

About the Offer: \$5 shipping on your online order with **Coupon Code BOXBORO** (one coupon code per order). Applies to US orders shipped via regular ground delivery. Does not apply to items purchased from ARRL partners. Ends Friday, September 30, 2016. Valid on retail orders from ARRL only.



FRIDAY, October 14th & Saturday October 15th 2016
DEERFIELD NH Fairgrounds.

www.near-fest.com www.forum.near-fest.com

GRAND PRIZE – Elecraft KX2 – ONE EACH DAY!!

You do not need to be present to win on Friday. Must be present Saturday.

THE AMATEUR RADIO CLUB AT YALE

W1YU

Invites you to check into our Weekly Net

Tuesdays, 8:00 pm Local Time

W1WPD/R - 442.5 MHz [+5] 073 DCS - Woodbridge, CT

or via the NEW-ENG Conference nodes

IRLP 9120 / ECHOLINK 9129

ALL ARE INVITED

Learn more about W1YU online

w1yu.sites.yale.edu ♦ facebook.com/deW1YU



FEMARA Incorporated

FEMARA Inc. is a Massachusetts non-for-profit corporation that sponsors and runs the ARRL New England Division Convention. The group, which has been in existence for over 30 years, began as a consortium of area radio clubs. FEMARA is qualified under IRS 501(c)(3). Donations to FEMARA are deductible as allowed by IRS regulations.

Our goals are twofold; to offer the richest and most diverse ARRL Convention in the country, and to support the ARRL Foundation's scholarship program.

73,
Mike Raisbeck, K1TWF
President, FEMARA, Inc.



FEMARA Officers

President	Mike Raisbeck - K1TWF
Vice President	Bob DeMattia - K1IW
Treasurer	Joyce DeMattia - N1QPH
Clerk	Al Prudhomme - W1DUW

Convention Committee

Chair	Bob DeMattia - K1IW
Vice-Chair	Mike Raisbeck - K1TWF
Contest Dinner & Special Event Station	Dennis Egan - W1UE
Exhibitors	Mike Raisbeck - K1TWF
Flea Market	Ken Caruso - WO1N
Parking	Al Prudhomme - W1DUW
Prizes & Entertainment	John Flood - N1JAFg
Publication Editor	Larry Banks - W1DYJ
Publicity	Terry Stader - KA8SCP
Publicity	Joe Weiss - W1HAI
Speakers - Forums	Phil Temples - K9HI
Ticketing/Website/Information Systems	Bob DeMattia - K1IW
ARRL Exams	Bruce Anderson - W1LUS
Volunteer Coordinator	Andy Stewart - KB1OIQ
Standing Committee Members	Ian MacKenzie - KB3OCF



Our 14 locations are proud to
serve the ham radio community
and participate in
the presentation of the
2016 Boxboro Convention



ICOM
ID-51A Plus



KENWOOD
TH-D72A

YAESU
The radio
FT-60R



Wouxun
KG-UV9D



- RETAIL LOCATIONS - Store hours 10:00AM - 5:30PM - Closed Sunday
- PHONE - Toll-free phone hours 9:30AM - 5:30PM
- FAX - All store locations
- ONLINE - WWW.HAMRADIO.COM
- MAIL - All store locations

ANALYSIS, CA (800) 834-4040	CARLETON, CA (877) 662-1745	SUNNYVALE, CA (877) 662-1740	PORTLAND, OR (800) 765-6207	PHOENIX, AZ (800) 590-7888	WOODBRIDGE, VA (800) 444-4790	FLANO, TX (877) 455-6790
BURBANK, CA (877) 662-1740	SAN DIEGO, CA (877) 520-0525	NEW CASTLE, DE (800) 644-4470	DENVER, CO (800) 444-0470	ATLANTA, GA (800) 444-7027	SALEM, NH (800) 444-0047	ONLINE STORE WWW.HAMRADIO.COM

Contact HRO for promotion details. Toll-free including Hawaii, Alaska and Canada. Call will be routed to the nearest store. All HRO 800-lines can assist you. If the first line you call is busy, you may call another AZ, CA, CO, GA, TX, VA residents add sales tax. Prices, specifications and descriptions subject to change without notice.

Quicksilver Radio



Hammo Can XL™ Complete Go Box



Ready to Go! Our new Hammo-Can XL™ is a complete VHF-UHF station in a box. Yes, the radio and battery are included! Powerpoles, USB, and lighter socket to power just about anything.

Play-Series™



Customize your new Ham shack or Go Kit with our meters and power modules. Easy to install and connect with your existing setup.

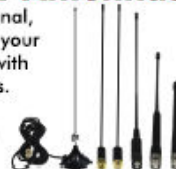
Portable Power Solutions

Portable power to go or backup in the shack. Includes Powerpoles, bright easy to read voltmeters, and lighted switch. Different types available.



Mobile and HT Antennas

Better antenna = better signal, it's just that simple. Extend your range and have more fun with one of our quality antennas. Whether you're portable, mobile, or at home, we've got you covered.



Powerpole Connectors

The standard for DC power connections. Power distribution, pre-built cables, mounts and more.



Find All Your Tools Here!



Search through our selection of crimpers, soldering irons and other handy tools for your shack.

Ultimate Crimp Kit™

The Ultimate Powerpole & Coax Prep, Strip & Crimp Kit. Only \$129.73



Low Loss Coax Cable



Poor quality coax can easily eat up half of your signal or more. We carry a wide variety of high quality low loss feedline. And it's 100% USA made!

Connectors & Adapters



Premium quality, no bargain stuff here. Adapters and connectors for most types of connections.

Find more great products on our new & improved website. More ham radio stuff than anybody!

www.qsradio.com